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POLITICAL PARTIES AND PUBLIC POLICIES. A REVIEW OF THE SPANISH EVIDENCE

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POLITICAL PARTIES AND PUBLIC POLICIES. A REVIEW OF THE SPANISH EVIDENCE

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ABSTRACT: To what extent does the incumbent party's identity shape public policies? We investigate this question by examining national and regional policies in Spain. First, we analyze the evolution of voter preferences and the platforms of the two mainstream parties (PSOE and PP) and of the newer challenger parties that emerged post-financial crisis (Ciudadanos, Podemos, and Vox). We focus on three key national-level issue dimensions: Economic, Social, and Centralization. As expected, the right-wing PP adopts a more conservative stance on all dimensions compared to the left-wing PSOE. However, the policy gap between these two parties remains relatively stable until the mid-2000s, with party platforms tracking the evolution of citizen preferences. After this period, platforms start to diverge, especially in the case of new parties, which display radical stances on these dimensions. We also provide descriptive evidence suggesting that these platform differences have translated into enacted policies. Second, to offer causal evidence on the effect of party identity on policy decisions, we examine partisan disparities in regional fiscal policies. Our findings reveal significant differences in tax policy following the granting of tax autonomy to the regions, somewhat moderated by tax competition and fiscal limits.

JEL Codes: D72, H70, R52

Keywords: Political parties; Electoral competition; Fiscal policy

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1. Introduction

Are voter preferences shaping public policies (Caughey and Warshaw, 2018; Achen and Bartels, 2008)? Or do public policies also depend on the identity of the ruling party or coalition (Lee et al., 2014)? How do economic shocks, party fragmentation, tax competition, or fiscal limits affect the relative strength of voter preferences versus party ideology in designing and implementing public policies?

This paper examines the Spanish case to shed light on these issues. Spain's political landscape is intriguing for several reasons. Firstly, for nearly three decades post-restoration of democracy, two major parties, the left-leaning PSOE ('Partido Socialista Obrero Español') and the right-leaning PP ('Partido Popular'), dominated the party system, reflecting a classic two-party competition framework. Secondly, significant upheavals, such as the financial crisis and the Catalan secessionist movement, have recently contributed to the fragmentation of the party system, giving rise to new political entities like Podemos (far-left), Ciudadanos (centre), and Vox (far-right) (Orriols and Cordero, 2016). As a result, Spanish politics now resembles more of a multi-party system. Here, platform moderation poses electoral risks for mainstream parties, and the possibility of forming centrist parliamentary coalitions has waned.

Thirdly, Spain presently exhibits one of Europe's highest levels of party polarization (Edelman Trust Barometer, 2023, https://www.edelman.com/). However, interestingly, polarization regarding citizens' policy preferences has not significantly increased, except for that associated with territorial conflicts (Garmendía and León, 2022). In addition, Spain operates as a quasi-federal state, marked by significant expenditure decentralization to its regions (Comunidades Autónomas). This distinctive arrangement presents an opportunity to examine the causal impact of national-level party ideologies on the crafting of regional policies. However, it is not a priori obvious what to expect here. One the one hand, Spanish subnational governments face many policy constraints due to mandates, fiscal limits, and tax competition, indicating a different trajectory. On the other hand, regions in Spain grapple with the 'nationalization' of regional politics, a phenomenon observed elsewhere (Caughey et al., 2018), suggesting that national partisan policy polarization might influence subnational dynamics.

We conduct two distinct analyses using national and regional data, respectively. In the first analysis, we perform a descriptive examination of national time series data spanning from 1981 to 2021, focusing on policy variation among parties. We explore citizen preferences, party platforms, and policies, categorizing them according to two of the main issue dimensions outlined by Caughey et al. (2019): *Economic Conservatism* and *Social Conservatism*. To these

dimensions, we add one on *Centralization Conservatism*, which these authors do not consider but is very relevant in the Spanish case. For the first two dimensions, we use the estimates of citizen policy preferences from Caughey et al. (2019), while for the third dimension, we rely on national survey data. We then analyse the positions of major Spanish parties on these three issues using data from the Party Manifesto project. Our analysis covers the PSOE and PP throughout the entire period and includes information on the three new parties (Podemos, Ciudadanos, and Vox) since their establishment. Finally, we illustrate the influence of parties on policies by relying on anecdotal evidence in the case of non-economic policies and on quantitative information in the case of economic ones. In the second analysis, we perform a quantitative examination of a comprehensive dataset covering regional fiscal policies from 2002 to 2021. This timeframe holds significance as it marks the completion of the transfer of responsibilities to the regions and the commencement of the tax autonomy period.

As expected, the right-wing PP's conservative platform sharply contrasts with the leftwing PSOE's more progressive stance at the national level. The main differences between the two parties are salient in policies relating to territorial and social dimensions. On the economic dimension, the PSOE demonstrates a higher propensity to expand public programs and enhance redistribution measures. Notably, these disparities in platform ideologies exhibit a degree of stability over time, closely mirroring shifts in citizen preferences across various dimensions examined. This suggests that, at least within this timeframe, voters wielded some influence over party platforms, and electoral competition prompted a certain degree of compromise. However, amidst significant economic and political turbulence that disrupted the Spanish party landscape since the financial crisis of 2007, we observe a deepening chasm between the major parties' platforms. This divergence primarily manifests in issues concerning the nation's territorial organization and social policies, with some variance noted in economic agendas. The driving force behind this schism appears to be the rise of new parties advocating more radical positions. Consequently, the mainstream parties may find themselves compelled to adopt more radical stances or even form coalition governments with these new entities to govern effectively. This shift could occur at the expense of voters' ability to shape party platforms directly, leaving them to influence policy by electing one party over another.

At the regional level, notable differences emerge in the design of tax collection and redistribution. The primary contrast lies in decisions regarding the reform of the inheritance tax. Right-wing governments have substantially decreased inheritance taxation, particularly for direct kinship. Another difference arises in personal income tax policies. Throughout the period, left-wing governments taxed the low-income people less. However, while the ideology

behind both of these taxation practices diverges significantly, it is important to note that none of these policies yields a significant change in the aggregate taxes collected by the governments – indicating that the observed effects on tax rates are primarily redistributive (taxing the rich more and the poor less) or compositional (shifting towards indirect taxes and away from direct ones). At the same time, throughout the entire period, left-wing governments have exhibited higher spending – mirroring the national-level evidence – funded by intergovernmental transfers and larger deficits. The additional spending by left-wing governments fostered various programs, including health, education and economic promotion. These results probably reflect the soft budget constraints of Spanish regional governments and appear as extra spending for left-wing governments because budget largesse mostly happened in Spain during periods of PSOE control of the national government.

In essence, the findings at the regional level complement those at the national level in three significant ways. Firstly, they provide causal evidence that once in power, parties enact distinct policies, suggesting that voters' ability to fully influence party positions is constrained. Secondly, there is scant evidence of extreme parties exerting influence on regional policies; for instance, the tax policies of PSOE-led governments resemble those of left-leaning administrations reliant on far-left support. Finally, the results underscore that policy divergence is contingent upon external factors. Tax policies, for instance, are shaped by tax competition, with noticeable differences emerging primarily in smaller or highly visible tax categories. Similarly, spending disparities arise only when additional transfers or lenient deficit constraints permit.

The paper is organized as follows. In the next section, we conduct a literature review on the influence of political parties on public policies—referring to Spain and other countries- and highlight our contribution. Moving to section three, we provide descriptive evidence at the national level for Spain. We commence by outlining the institutional framework, examining the evolution of the Spanish party system over recent decades, and briefly discussing potential underlying factors for these changes. After that, we present the evidence on the correlation between platforms and preferences, the convergence or divergence between platforms, and policy decisions. In section four, we perform a quantitative analysis of political party effects on regional government policies in Spain. Here, we once again detail the institutional context before presenting our findings. Finally, we offer an overview, highlighting key insights, and propose avenues for future research.

2. Literature review

Theory. The literature provides two polar views of the role of elections and parties. On the one hand, spatial voting models with two parties that can commit to promises predict a convergence of platforms (and policies) to the position of moderate voters (Downs, 1957). On the other hand, some contributions highlight that the convergence to a moderate position completely halts when parties lack the ability to commit (Alesina, 1988). Somewhat in between, some works suggest that convergence might be partial if there is uncertainty about the response of voters to policy promises (Wittman, 1983), suggesting divergence should be stronger in safe than in close elections. However, some authors have questioned this hypothesis, suggesting that some parties might move to the extreme to obtain more voters among their core supporters, either through an increase in turnout or of resources (Adams et al., 2010).

Even more markedly divergent policy platforms could result in the context of multi-party elections with voters who care about the quality of candidates (Schofield, 2007; Schofield and Sened, 2006). ¹ In these models, platform divergence can occur whenever there are important centrifugal forces. These forces strengthen as voters' preferred policies become more heterogeneous and the differences in candidate quality become more marked. These models predict that party positions during the campaign can disseminate along a principal policy axis. Post-election coalition bargaining between the parties determines the final policy implemented, lying at some point between the positions of the parties forming the coalition.

Which is the setting that better reflects the reality of the Spanish party system? We believe that the bipartisan model with some forces that push for convergence (electoral competition for moderate voters) and others for divergence (differential turnout between the core supporters of the two main parties) might be a good characterization for the period that goes till the mid-2000s. The multiparty model might be more appropriate to characterize the more recent era of party fragmentation. But, how did we transition from one setting to the other? The paper by Aragonés and Ponsatí (2002) sheds light on this point. They analyze the effect of shocks to issue salience in a multidimensional two-party electoral competition model. The shock makes both parties shift their policy choice from their ideal points to the median voter's ideal point in the new salient issue. The polarization of the distribution of voter preferences generates a disadvantage for one of the parties, which is forced to implement a large policy shift. This might even generate the birth of new parties from dissatisfied factions,

¹See Shepsle (2012) for a review of the literature on multiparty electoral competition.

disrupting the entire party system². Even if this article uses this model to explain the disruption of the Catalan party system in recent decades, we think it can also be applied to the analysis of the Spanish one³.

Empirics. Empirical research on the impact of political parties on macroeconomic policies at the country level spans an extensive body of literature. Potrafke (2017) conducted a comprehensive review, concluding that leftwing and rightwing parties pursued distinct economic strategies until the 1990s, with these differences gradually diminishing over time, probably due to higher constraints related to the mobility of factors. Similarly, Krause and Potrafke (2020), in their study of the US case, observed that both Republican presidents and governors implement more liberal policies compared to their Democratic counterparts. While most studies reviewed lack a causal interpretation, these surveys shed light on important trends.

However, within the context of the United States, certain studies employing causal designs have unearthed evidence of divergence in roll call votes among state legislators (Lee et al., 2004; Fowler and Hall, 2016). Moreover, causal evidence pertaining to US local governments suggests either a negligible effect of party affiliation or variable effects, contingent upon factors such as mobility, state mandates, and policy type (Ferreira and Gyourko, 2009; Gerber & Hopkins, 2011; de Benedictis-Kessner and Warshaw, 2016).

The literature exploring the impact of political parties on policy outcomes in the Spanish context is not particularly extensive. While political scientists have produced numerous papers analyzing the success and decline of various parties and their electoral strategies, few examine their effects on policy formulation. One notable exception is Boix's (1998) work, which supplements his examination of conservative and social democrat policies in OECD countries with a detailed investigation into the economic policies of early PSOE governments in Spain. These administrations serve as a prime example of left-wing governments implementing higher taxes to fund investments in both physical and human capital.

Additionally, some studies utilizing local government data have identified some effects of party affiliation on policies, though these effects tend to be either marginal, confined to

² Some authors model directly the emergence of new parties as a result of the increase in the salience of some issues. See, for example, Anesi and De Donder (2011).

³ For motives of space, in this paper we skip the analysis of the Catalan and Basque party systems, which have their own peculiarities. For example, because of the relevance of the territorial issue, the Catalan party system has two clear orthogonal dimensions. Accordingly, the party system has always been quite fragmented, with both national and regional parties scattered in the left-right ideological dimension. On the top of that, Catalan regional parties have been instrumental in the formation of coalition governments at the national level several times.

specific policy areas, or heterogeneous in nature. For instance, Gago and Carozzi (2023) observe that left-wing mayors allocate more resources to gender-oriented expenditure programs, while Solé-Ollé and Viladecans-Marsal (2003) find that right-wing mayors tend to permit more land development, and Solé-Ollé (2006) suggests that left-wing municipalities exhibit higher expenditure, taxation, and deficits, but only in cases where their electoral victories are substantial.

3. Parties and policies in Spain: national-level evidence

3.1. Evolution of Spain's Party System

After transitioning from dictatorship to democracy in the 1970s, Spain adopted a parliamentary system with a constitutional monarchy. This system features a bicameral legislature comprising the Congress of Deputies and the Senate. The monarch serves as the ceremonial head of state, while the Prime Minister acts as the head of government. In Spanish democracy, political parties play a crucial role in representing citizens' interests, shaping policy agendas, and facilitating the functioning of democratic institutions. The Spanish party system has evolved over time. We can differentiate between three different periods:

Prologue (1976-1982): After Franco's death, King Juan Carlos appointed Adolfo Suarez to spearhead Spain's democratic transition. Suarez, a centrist figure with ties to the conservative Franco regime, was selected for his progressive reformist stance. Less than a year later, in May 1977, Suarez's leadership was validated in the inaugural general elections. Spain's democratic constitution was ratified in 1978, and Suarez retained his position as Prime Minister in March 1979. However, his tenure (1979-1982) was tumultuous, marked by political upheaval, including terrorism from the Basque group ETA, a failed military coup in 1981, and negotiations with emerging regional authorities. Economic challenges, such as the 1979 oil crisis, further compounded the instability. Faced with mounting crises and internal party discord, Suarez resigned in January 1981. By that time, his party, the UCD, had fallen out of favour, leading his successor, Calvo-Sotelo, to abstain from seeking re-election. The 1982 elections marked the dawn of an era dominated by the left-wing PSOE ('Partido Socialista Obrero Español') – which secured a landslide victory at these elections- and the right-wing PP ('Partido Popular') as the two primary political forces in Spanish politics.

PP and PSOE dominance (1982-2007): For nearly three decades, the PP and the PSOE dominated Spain's national politics. Under Felipe Gonzalez' leadership, Spain achieved a significant milestone by joining the EU in 1986. Gonzalez and the PSOE held power for nearly

fourteen years, contending with increasing competition from the burgeoning PP. Initially rooted in Francoist precursor parties, the PP emerged from the AP ('Alianza Popular'), positioned firmly on the right of the political spectrum. However, by the mid-1980s, the party underwent a transformation towards the centre, forging alliances with other small centre-right parties. Manuel Fraga, a former minister during Franco's dictatorship, stepped aside, allowing José Maria Aznar to lead the PP's integration into the European People's Party in 1991. Aznar's victory over Gonzalez in the 1996 general elections secured his position as Prime Minister until 2004 when the PSOE unexpectedly defeated the PP.

Fragmentation (2007-today): During the early years of democracy, Spain witnessed the rise of several challenger parties, none of which could disrupt the quasi-bipartisan dynamic. However, the financial crisis of 2007-2008 and the subsequent Euro debt crisis profoundly impacted Spanish voters, exacerbated by staggering unemployment rates reaching 27% in 2013 and a widespread lack of trust in traditional political elites. Concurrently, tensions over regional autonomy in Catalonia reignited. In response, new parties emerged, such as Ciudadanos, founded in 2006 in opposition to Catalan nationalism. Podemos, originating from the 2011 anti-austerity movement, secured 65 seats in the Lower Chamber in 2015. Amid institutional and political turmoil in the early 2010s, the far-right party Vox emerged as a break-away from the PP, experiencing significant growth following the Catalan referendum crisis of 2017. Vox's rise was particularly notable in southern rural regions with higher reliance on fiscal transfers and higher immigration rates. They secured seats in the Andalusian parliament in 2018 and 24 seats in the national parliament in 2019, subsequently entering many regional parliaments after the 2023 elections. Vox played a pivotal role in ensuring PP candidates won presidencies in various regions and even secured cabinet positions in places like Castilla-León, Valencia, Aragón, Andalusia, Extremadura, the Balearic Islands, and Murcia.

The dominance of Spain's party system by the two mainstream parties and its subsequent fragmentation is depicted in Figure 1. The left panel illustrates the seat share of these parties in the Spanish parliament, with a peak of over 90% in 2008, just before the onset of the financial crisis, and a decline to around 50% by 2019 following the emergence of three new parties. The right panel displays the evolution of the Effective Number of Parties for the entire party system and within the main ideological blocs. It reveals a significant increase from around 2.5 to 5 from 2008 to 2019, indicating fragmentation. This fragmentation initially affected the centre

bloc with the emergence of Ciudadanos, followed by the left-wing bloc with the rise of Podemos, and eventually, the right-wing bloc with the creation of Vox⁴.

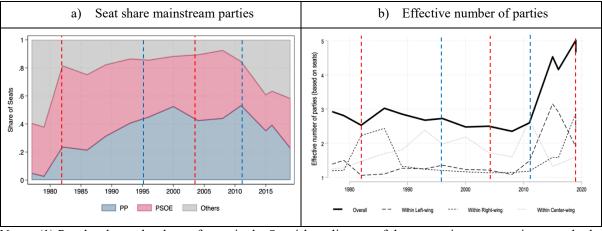


Figure 1. Fragmentation of the Spanish party system

Notes: (1) Panel a shows the share of seats in the Spanish parliament of the two mainstream parties, namely the PSOE (in red) and the PP (in blue), (2) Panel b shows the Effective Number of Parties, computed for the whole party system and the left-wing, right-wing and centre parties. (3) The dotted lines indicate government turnover (Left→Right in blue and Right→Left in red). (4) Sources: see Appendix.

Figure 2 shows evidence of the various shocks that have disrupted Spain's party system in recent years. The graph depicts the percentage of Spaniards identifying each issue as among the country's three most pressing problems. In the left panel, we focus on three economic-related concerns: unemployment, general economic problems (accounting for job instability, stagnating wages and inflation), and social benefits (that is, concerns about the sustainability of the pension system and the welfare state in general). The data highlights the persistent concern regarding unemployment, particularly during recessions, which diminishes during periods of economic recovery. Interestingly, unemployment was less of a concern during the recent COVID-19 recession. Conversely, worries about job instability and other economic problems and the reliability of social benefits have increased. This trend may be linked to significant reforms implemented by the PP government in 2012, particularly in labor market restructuring, as well as reforms by the PSOE-Podemos coalition in recent years, including the increase in the minimum wage. Further discussion on these reforms will be provided later.

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⁴ Figure A.2 in the Appendix compares fragmentation and polarization levels in Spain with other EU countries. Initially, the Effective number of parties in Spain was much lower but increased after the mid-2000s shocks. Similarly, polarization, measured as the vote-weighted distance from the mean ideological position of each party, was lower than in the EU before this period but higher afterward.

% of Spaniards citing this issue among the three worst problems

a) Economic problems

b) Other problems

Figure 2. Economic and political shocks

Notes: (1) The figure depicts the evolution of the % of Spaniards citing each of the issues among the three worst problems of the country, according to CIS surveys. (2) The left panel reports the evolution of three economic indicators: unemployment, economic problems in general (which picks concerns regarding inflation, wages, and job instability) and Social benefits (which picks concerns about the pension system and the welfare state in general). The right panel reports the evolution of three non-economic problems: corruption, regional grievances (i.e. the Catalan secessionist process) and immigration. (3) The vertical dotted lines indicate government turnover (Left→Right in blue and Right→Left in red) and the grey areas indicate recessions. (4) Sources: see Appendix.

In the right panel of Figure 2, we highlight responses regarding three additional issues: corruption, immigration, and regional grievances. Concerns about corruption peaked for the first time during the last Gonzalez government, driven by prominent scandals within the national executive. However, corruption became a major worry during the financial crisis, reaching a staggering 60% (just below the 80% recorded for unemployment). This surge was fuelled by a wave of scandals stemming from the housing boom of the 2000s, with the seriousness of the matter becoming evident as numerous cases emerged and prosecutions ensued. Both mainstream parties, PSOE and PP, were affected but the impact was particularly severe for the PP, as investigations revealed party involvement in a bribery scheme to top up salaries for high party ranks⁵. Concerns about immigration surged during the housing boom, coinciding with peak immigrant arrivals, but receded rapidly during the crisis, only to resurface during the recovery. Similarly, concerns about territorial issues, primarily the Catalan secessionist attempt, remained low until 2017, when the Catalan referendum occurred, before

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⁵ These corruption scandals adversely affected electoral support for implicated incumbents in local elections (Costas et al., 2012) and reduced trust in government and parties (Solé-Ollé and Sorribas-Navarro, 2018). Ultimately, the scandals affected the performance of mainstream parties in national elections, benefiting primarily Podemos (and to a lesser extent, Ciudadanos) and exacerbating the disruptive effects of rising unemployment (Sanz et al., 2022). The combination of these factors likely contributed to political turnover at the regional level in 2015. Additionally, the Gürtel case verdict condemning the PP prompted the 2019 motion of no confidence in the national parliament and the government turnover.

declining again⁶. It is worth noting that while these issues may not be top of mind for Spaniards, they underpin the rise of both Ciudadanos and Vox, with clear consequences for future governance and policy.

Epilogue: The force of the shocks initiated in the late 2000s after almost thirty years of bipartisanship caused a profound structural shift in the Spanish national party system. They allowed the rise of alternative formations, yielding more political fragmentation and political instability (five general elections since 2015 and fifteen since 1979). Because of the importance of coalitions to govern, this shift gave new parties particular importance in forming a government. As a result of this fragmentation and the political importance of these new parties, the weakened traditional PSOE and PP were forced to open a second front at the tails of the political spectrum and, therefore, became more polarized. This surely impacted the electoral strategies of traditional parties and may influence policy by conditioning the feasibility of certain types of government coalitions.

3.2. Preferences and Platforms

How have these shocks affected the preferences of Spaniards regarding public policies? How have the existing political parties reacted to the shocks and the shifting preferences of Spaniards? Have party platforms diverged as a result? Do the old parties lead the reaction, or does the entry of the new ones influence it? In this section, we will try to answer these questions by combining data on the evolution of citizen preferences and data on party policy positions extracted from party platforms.

Data. The first type of data comes from Caughey et al. (2019), who measure European citizen's policy preferences using a bunch of information from country surveys. An advantage of their measures is that they are not based on the parties' positions. For example, other scholars have used measurements based on information that comes from the 'party manifesto project' (https://manifesto-project.wzb.eu/): they generate a median voter position on each issue by weighing the position of the parties by their vote share. Clearly, this measure is endogenous and makes it very difficult to ascertain whether there are changes in voter preferences that are independent of the changes in the parties' positions. We use the indicators that Caughey et al. (2019)

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⁶ The beginning of the Catalan conflict dates back much earlier; its onset is marked by the failure of the reform of the autonomy charter promoted by the Catalan government (a coalition between socialists, left-wing separatists, and far-left parties) and approved in 2006 in the Spanish parliament with the votes of PSOE but without support from the PP. Subsequently, the Constitutional Court (with a conservative majority) repealed significant parts of the law in 2010.

elaborated on two policy issues: *Economic Conservatism* and *Social Conservatism*. These policies are very clearly delineated from each other, and there is a lot of evidence that they are the most relevant ones in European countries. Economic conservatism refers to policies related to the size of the public sector and redistribution or the regulation of markets. Social conservatism refers to moral policies such as divorce, abortion, LGBT rights or gender policies. One limitation of this data is that it ends in 2016, so we cannot track the evolution until the last election for which we have data on party platforms. When discussing the results, we will comment on whether we believe the voter preference trends extend to 2019 and beyond or not.

The data on party platforms comes from the already mentioned 'manifesto project'. We selected the questions from the project that fit better with the ones used by Caughey et al. (2019) to measure citizens' preferences. The match is not perfect, but we believe the variables used to quantify citizens' preferences and party positions do measure very similar things. The details of the computation of these variables are also in the Appendix. This data is available until 2021. Again, given the recent developments (e.g., the entry of Vox in many municipal and regional governments as of 2023), we may want to say something regarding the evolution of party positions from 2021 to 2023.

Besides these two dimensions, we also focus on a third one, which we call *Centralization conservatism*, which is related to the preferences concerning the territorial organization of government (whether one would like more or less decentralization)⁷. This is not studied by Caughey et al. (2019) but, as we have already explained, is a crucial dimension in the Spanish case. We use survey data from the CIS (Centro de Investigaciones Sociológicas) to measure citizen's preferences on this issue. Then, we carefully pick the questions from the party manifesto project that fit this concept better. Again, details are to be found in the Appendix.

Results: Economic and Social Conservatism. Figure 3 depicts the temporal evolution of citizens' preferences (top panels) and party positions (bottom panels) on *Economic conservatism* (left panels) and *Social conservatism* (right panels). Regarding party positions, we illustrate the stances of the two mainstream parties (PSOE and PP, in red and blue, respectively) and the three new challenger parties (Ciudadanos, Podemos, and Vox, in orange,

⁷ We also looked at another issue dimension already considered by Caughey et al. (2019), namely *Immigration conservatism*. The evolution of citizen preferences over time tracks the size of the Spanish immigration shock (more conservatism when immigrant inflows are larger) but the level of conservatism on this issue remains pretty low. The position of mainstream parties is quite moderate and has started to diverge a bit after the arrival of Vox, which does have a very extreme position on this issue. Despite this, we have decided not to show the result for this issue because we believe that the truly divisive one is that on centralization.

purple and black, respectively), specifically focusing on the years following their initial participation in national elections. It is natural to group these two dimensions together as, although they are distinct and lead to different policies, they are quite correlated. The policy that seems quite orthogonal, and more divisive to the other ones, is centralization (Figure A.1 in the Appendix).

Voter preferences a.ii) Social Conservatism a.i) Economic Conservatism 15 2 Ġ -15 -25 -25 1980 1990 2000 2010 1980 1990 2000 2010 2020 b) Party platforms b.ii) Social Conservatism b.i) Economic Conservatism 15 15 C's Podemos Podemos VOX 2 ιņ -15 -15 -25 25 35 35 2000

Figure 3.

Voter Preferences vs Party Platforms over time: Economic and Social conservatism

Notes: (1) The top panels show the evolution of citizen preferences in the indicated issues (Economic conservatism in the left panel and Social conservatism in the right one) as elaborated by Caughey et al. (2019). (2) The bottom panels show the evolution of party platforms in the same issues, according to data from the 'Party Manifesto' project; we show the series for the two mainstream parties (PSOE and PP, in red and blue) and the three new parties (Ciudadanos, Podemos, and Vox, in orange, purple, and green, respectively. (3) The vertical dotted lines indicate government turnover (Left → Right in blue and Right → Left in red). (4) Sources: see the Appendix.

Regarding *Economic Conservatism*, there have been some shifts in voter preferences over the past few decades (see panel a.i Figure 3). In the 1980s, voters tended to lean towards the left, indicating lower conservativeness. However, there was a clear trend towards a more right-

wing or conservative stance during the 1990s. This shift suggests that voters became more economically conservative following a period marked by a significant expansion of the public sector, heralded by the first PSOE governments.

This expansion led to a convergence with the public spending and taxation levels seen in modern countries. Notably, this period witnessed the modernization of the income tax system, the introduction of the VAT, and aggressive measures to combat tax evasion, all against a backdrop of rising deficit and debt levels. The evolution of citizen preferences indicates a return to less conservative positions after this period, a trend that persisted through the financial crisis. However, as the data only goes up until 2016, it is challenging to determine subsequent trends. On the one hand, economic difficulties such as job instability and stagnating wages have persisted (as indicated by Spaniard's concerns about this problem in Figure 2), potentially influencing the demand for redistribution, as evidenced by the work of Sorribas-Navarro and Serra-Sala (2022). On the other hand, there are indications that younger cohorts, who bear the brunt of temporary contracts and job instability, exhibit more conservative tendencies and less preference for redistribution.

In terms of *Social Conservatism*, as indicated in panel a.ii of Figure 3, there has been a consistent downward trend towards less conservative citizen preferences. This trend was particularly pronounced during the 1980s, aligning with the country's modernization efforts following the Franco era. Remarkably, this trend persisted over the following two decades. While the figure hints at some stagnation in recent years, certain reports suggest that this change may have continued, especially among the youngest cohorts who might be becoming more conservative, also on the social dimension. However, it remains unclear whether this stagnation reflects a long-term social shift or a reaction to aggressive policies implemented by the left⁸.

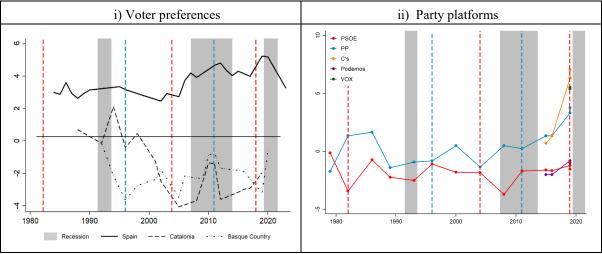
Regarding party positions, panel b.i of Figure 3 illustrates a correlation between the evolution of the economic platforms of the two mainstream parties and changes in citizen preferences. In the 1990s, during the Euro accession process, both parties shifted towards conservatism, a trend that was reverted afterwards. Consistently, the PP maintains a higher economic conservatism stance than the PSOE over the whole period, with the difference between parties remaining quite stable over time. A convergence in the 1990s likely reflects a consensus regarding the goal of Euro accession, while divergence in the aftermath of the 2011 Euro crisis reflects varying strategies between the two parties (expansionary Keynesianism vs.

⁸ See for example the article in Politico: "How Spain went woke – and why that may not last". https://www.politico.eu/article/spain-went-woke-lgbtq-equality-gender-women-rights/, and the article by Anduiza and Rico (2022) providing evidence on the recent backlash to gender policies in Spain.

fiscal austerity). Notably, in recent years, a significant divergence has been led by the emergence of new parties, such as Podemos and Vox, which hold more extreme positions.

Panel b.ii of Figure 3 documents the evolution of party platforms in the social dimension. Again, the two mainstream parties followed the evolution of citizen's preferences for a long period; the PP stood as more conservative than the PSOE, but the difference was not large. As already commented, the divergence on this issue started in 2004 with the Zapatero moves on that dimension. This could be interpreted as a strategic issue selection by the PSOE, which found it difficult to win the economic confrontation (Aragonés et al., 2015). This divergence persisted in the following years, and the graph suggests it has recently been amplified by the entry of Podemos and Vox in the game, which have more extreme views on this issue.

Figure 4
Voter Preferences vs Party Platforms over time: Centralization Conservatism



Notes: (1) The left panel show the evolution of citizen preferences regarding centralization (the difference between the share of respondents in favor of more centralization and the share in favor of more decentralization); the series is shown for the whole of Spain and also for Catalunya and the Basque Country. (2) The right panel shows the evolution of party platforms in the same issue, according to data from the 'Party Manifesto' project; we show the series for the two mainstream parties (PSOE and PP, in red and blue) and the three new parties (Ciudadanos, Podemos, and Vox, in orange, purple, and black, respectively. (3) The dotted lines indicate government turnover (Left → Right in blue and Right → Left in red) and the grey areas indicate recessions. (4) Sources: see Appendix.

Results: Centralization Conservatism. Examining panel i in Figure 4, we observe a significant increase in the proportion of Catalan voters in favor of more decentralization until 2006. This dropped somewhat thereafter, coinciding with the national parliament's approval of the new autonomy charter and its subsequent endorsement in a regional referendum. However, dissatisfaction with the current level of decentralization suddenly worsened again after 2010 when the Spanish Constitutional Court ruled against the charter. This laid the groundwork for the secessionist movement's rise, culminating in the 2017 referendum and the subsequent political crisis. Notably, the proportion of Spanish voters in favor of less decentralization

mirrored the situation in Catalonia: it increased following the charter's approval, persisted until the court's ruling, and surged again after the secession referendum.

The evolution of the platforms of the two main parties concerning this issue remained relatively stagnant for a significant period when their salience was low. However, they began to diverge sharply once these issues gained prominence, and this divergence persisted even as public attention waned. The divergence emerged in the 2008 electoral campaign after the approval of the autonomy charter. In the 2011 elections, following the demise of the charter, the PSOE made some efforts to converge towards right-wing positions, likely out of concern for potential electoral consequences. However, the subsequent secession referendum and the emergence of two new parties, Ciudadanos and Vox, with staunchly conservative positions on this issue, compelled the PP to align with them, preventing other parties from diverging⁹. Ironically, while this issue may have been electorally advantageous for right-wing parties, it has thus far hindered their path to office. Parliamentary fragmentation means that forming a government without a majority of seats would require a coalition with regionalist parties an option rendered unviable due to the PP's extreme position on this issue and to Vox's presence.

Summing up, the results discussed above tell us that the positions of the two mainstream Spanish politicians have been following citizens' preferences quite closely and have been relatively close to each other for an extended period. However, some shocks of an economic and political nature, mainly related to economic crises but also to a crisis related to the territorial structure of the state, have forced their platforms to diverge or forced them to enter coalition agreements with new political parties with extreme positions in some issues.

Results: Policies. The remaining questions now are, first, whether this divergence in party platforms influenced the policies implemented by governments ruled by a different party and/or coalition and, second, whether this impacted all dimensions of competition or just those where the divergence is more staking. It is very difficult to perform a quantitative analysis in this case, mostly because we do not have a compendium of policies implemented by each government that could be combined in a conservatism index (as Caughey and Warshaw, 2018, did for the US). This means that the discussion below will mostly be anecdotal or based on economic indicators. Economic indicators are good because they are quantifiable. However, they also

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⁹ For instance, both Ciudadanos and Vox share with the PP the view that the Catalan problem should be addressed solely through the judiciary. Additionally, Vox is the only party that, on top of this, included in their platform a proposal to eliminate the regional governments altogether.

have drawbacks because they are often only outcomes of policies and not policy decisions, and do not allow us to look in the same way at the other dimensions.

So, let us start with the anecdotal approach. First of all, the policy differences in the case of the *Centralization conservatism* dimension, which is the most divisive one, have been obvious: the PSOE supported the autonomy charter in 2006 and is making some moves nowadays to solve the consequences of the repression of the secessionist movement. The PP government made some decentralization concessions during the period 1996-2004 to gain support from the Catalan center-right parties (e.g., by increasing regional tax autonomy) but mounted an aggressive campaign against the charter and later on chose a strategy against secessionism based solely on political repression and the use of the judiciary. It is unclear whether these policies could be even more conservative with Vox in the government.

Second, regarding the *Social conservatism* dimension, there is a large list of progressive policies introduced by PSOE governments and/or have been opposed by the PP. First of all, the first divorce law in Spain was promoted by the center right UCD in 1981 but was opposed by 'Alianza Popular', the precursor party of PP. Second, abortion was allowed in 1985 thanks to a law promoted by the first PSOE government and was made easier in 2010 under the PSOE government led by Zapatero. The PP voted against the law in both instances and made the law more restrictive once back in office after 2011. Later on, the PSOE reinstated the 2010 law. Third, same-sex marriage and adoption by same-sex couples were legalized in 2005 by the PSOE government, which also passed the gender equality law in 2007 –extending maternity leave and introducing paternity leave and gender parity in electoral lists-. The PP opposed the first law and was the only party that abstained in the second one. During the same term, the parliament passed the 'trans law', which made possible the change of name and gender on official records without the need for genital surgeries. Subsequently, following the 2019 elections, a coalition government between PSOE and Podemos emerged. During this tenure, the coalition passed the 'euthanasia law', despite opposition from the PP. Additionally, Podemos spearheaded the enactment of two other significant laws: the 'sexual freedom act', which reinforced the concept of consent, and a bill aimed at enhancing transgender rights, allowing individuals over the age of 16 to change their gender identity. These progressive laws faced vehement opposition from right-wing parties, sparking tensions even within the moderate faction of the PSOE.

Third, regarding the *Economic conservatism* dimension, we have selected a handful of policies that we have been able to quantify for the whole period of study and that we think are quite representative. In Figure 5, we report the evolution of public spending over GDP, an

index measuring the degree of redistribution, the ratio between the minimum and maximum pension (which measures the degree of redistribution that can be attributed to the pension system), and the real minimum wage. Panel a shows that the PSOE has been the party in power during all the periods where the size of the public sector has experienced a substantial increase; this happened in the 1980s with the first PSOE governments -which was responsible for the building of the Spanish welfare state, with policies such as the establishment of universal access to health care in 1986 or the extension to compulsory schooling to 16 years-, and also with the Zapatero governments of the 2000s – which notably increased minimum pensions and funding for elderly and disability home care-, and finally with the Sanchez government that had to deal with the COVID crisis. Some caveats are in order. Part of the spending growth experienced during the crisis was not discretionary but fuelled by the rise in unemployment benefits. Despite this, most of the examples of policies provided above did not happen during crises. Also, some spending increases happened in situations where there was no external oversight by the EU (the 1980s) or when this was temporarily relaxed (the onset of the 2000s financial crisis and post-COVID years, which also saw a huge influx of EU funds). Because of this, it is difficult to say what the PP would have done in these situations.

It is true, however, that the PP has always been a champion of fiscal sustainability. In panel a, it can be seen that PP was in charge during the convergence process to the euro and the euro crisis. In both cases, it had to implement the fiscal adjustment required by the EU, but the party's discourse during these periods suggests this fit with its ideological positions. Specific policies during these periods are the privatization of public firms during the 1990s, the establishment of deficit limits and the spending rule after 2011. Of course, it is not clear how the PSOE would have behaved in such a constrained environment. Notice, however, that although the PSOE was hit by these crises quite unexpectedly, the PP was, in some sense, elected by Spaniards in 1995 and in 2011 to restrain public spending, which obviously did.

Panel b in Figure 5 displays the evolution of the redistribution index, which has been computed with WID data following the same approach as Blanchet et al. (2019). This index is computed as the ratio of pre-tax (and transfer) income for the top 10% and bottom 50% minus the same ratio computed with post-tax (and transfer) income. The index takes positive values when pre-tax inequality is greater than post-tax inequality; an increase in the value of the index indicates that the difference between pre-tax inequality and post-tax inequality grows and so that the redistributive power of the tax and transfer systems has increased. The figure shows significant increases in the redistributive intensity of tax and transfers during the PSOE governments of the 1980s and 2000s and, to a lesser extent, after 2019. The intensity of

redistributive measures dwindled during the last PSOE government of the 1990s. Several factors likely tempered the PSOE's policies during this period, including the party's declining popularity and its reliance on support from center-right regionalist parties.

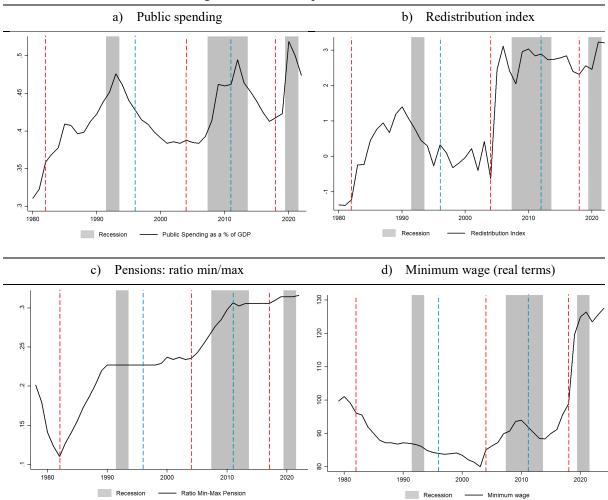


Figure 5. Economic policies over time

Notes: (1) Each of the panels indicates the evolution of one economic policy variable: public spending/gdp (panel a), redistributive index computed with WID data (that is difference between the ratios of pre-tax shares for the rich -top 10%- and the poor -bottom 50%- and the same ratio after tax, panel b), the ratio between the minimum and the maximum public pension, and the real minimum wage. (2) The dotted lines indicate government turnover (Left→Right in blue and Right→Left in red) and the grey areas indicate recessions. (3) Sources: see Appendix.

Panel c shows that the ratio between the minimum and maximum pension increased dramatically during the PSOE governments of the 1980s and 2000s and a bit less after 2019 and was untouched during the PP terms. The pension system in Spain is a very powerful redistributive instrument because the minimum and maximum pensions compress the distribution of pensions with respect to that of salaries. Finally, panel d shows the evolution of the minimum wage in real terms. Here, the picture is more nuanced. The largest increases in the minimum wage happened after 2018 under PSOE governments but were promoted by the

junior partner Podemos. This resulted in an accumulated nominal raise of 54% (less in real terms, given the high inflation). There have also been some increases under the PSOE and PP governments in previous terms. Finally, the real minimum wage fell until mid-2000, even during the PSOE governments of the 1980s. The PSOE raised the nominal wage, but it was not enough to keep pace with the two-digit inflation of these years. In addition, nominal wages also rose during this period, and the main worry was unemployment ¹⁰.

Apart from the policies depicted in Figure 5, there is anecdotal evidence of disparities in other areas such as tax reforms and labor market policies. In terms of tax reforms, the first observation is that there were no substantial alterations in personal income taxation during the initial period of PSOE governance (Gago et al., 2022). Second, the reforms to the personal income tax carried out in 1999 and 2003 by the PP reduced top tax rates and increased the basic income exemption, resulting in a significant negative impact on revenue (Gil et al., 2013; Burriel et al., 2017). The PP's fiscal consolidation plan in 2012 entailed a temporary hike in income tax rates, which was more than reversed by 2015. Third, during the economic boom years of 2007 and 2008, the PSOE decreased marginal tax rates while augmenting the labor income tax credit and the savings tax rate, thereby characterizing the reform as a tax reduction with a redistributive element. However, in 2010, amidst severe budgetary challenges, the PSOE partially reversed this reform by scaling back the labor tax credit. Subsequent changes to the income tax introduced by the PSOE-Podemos coalition government after 2019 have been modest in scope but exhibit a distinct left-wing orientation, as evidenced by the rise of top marginal tax rates on labor income and savings. Finally, it is challenging to identify tax reforms that can be categorized as partisan in the case of other taxes such as the corporation tax or the value-added tax (VAT). The PSOE initially reduced the corporate tax rate in 2007 (from 35% to 30%), which was later followed by the PP's reduction in 2015-16 (from 30% to 25%), aligning with an international trend. Similarly, the introduction of the VAT by the PSOE in 1986 and subsequent raises in VAT rates by the PP in 2012 were driven by EU requirements.

In the case of labor market reforms, the one implemented by the PP in 2012 can be characterized as conservative, reducing severance pay, easing collective dismissals, and introducing greater flexibility in working conditions and collective bargaining. It seems that this reform contributed positively to the reduction of the unemployment rate and the increase in job insecurity. Although Podemos campaigned on the repeal of the reform, the bargaining with the

¹⁰ Figure A.3 in the Appendix displays the evolution of other Economic indicators, such as the Unemployment rate, the GDP growth rate, and the Debt to GDP ratio. In general, all these indicators also tend to deteriorate more during socialist governments.

PSOE ended up in a reform that kept most of the previous changes, though it reduced the reliance on temporary contracts, enhancing job security, which can be qualified as progressive.

The overarching conclusion drawn from examining these policies is that while party distinctions do exist, they are notably nuanced for two primary reasons. Firstly, the policies enacted are heavily influenced by external factors. In the realm of tax reforms, this often entails the imperative of fiscal consolidation or the dynamics of tax competition. Similarly, with labor market reforms, the necessity to broker agreements with various social actors looms large. In both contexts, compliance with EU directives carries significant weight. Secondly, many of these policies are inherently intricate, with reforms typically addressing multiple facets simultaneously. For instance, left-wing administrations may indeed enact tax reductions, yet concurrently introduce measures aimed at enhancing redistributive mechanisms.

Summary. We have presented a bunch of anecdotal and quantitative evidence that suggests that the policy decisions of left vs right-wing governments have been different over the whole democratic period studied. Maybe the most staking differences refer to social and centralization policies. This is in part because, compared to the economic policies, these policies are not subject to external constraints, and more recently, these issues are 'owned' by extremist parties. However, we have also provided some evidence regarding differences in economic policies. There seem to be differences in policies related to the size of the public sector and the degree of redistribution, although these differences may be muted in periods where external constraints are tight. Although there are also some differences in policies related to labor market regulation or pre-redistribution, here the results are less clear, probably because the bargaining with social agents and external pressures also matter a lot.

4. Parties and policies in Spain: regional-level evidence

In this section, we explore potential partisan disparities in the tax and budgetary strategies implemented by Spanish regional governments. This analysis presents a unique opportunity to leverage a broader spectrum of ideological shifts than what is typically observed at the national level allowing us to examine the causal effect of party identity on policies. However, it's crucial to acknowledge a potential drawback: the regulatory constraints prevalent at the national level, such as tax competition and fiscal limits, may exert even greater pressure at the regional level, possibly limiting the extent of variation we can observe.

4.1. Institutional context

Over the past few decades, Spain has undergone a significant and successful decentralization reform (Solé-Ollé, 2009). From the 1980s to the early years of the current century, key public services such as healthcare, social services, and education were decentralized to the seventeen newly established regional governments, known as 'Autonomous Communities'. Presently, this intermediate tier of governance accounts for nearly 35% of public expenditure.

In the initial phases of the expenditure decentralization process, funding primarily relied on intergovernmental transfers. However, since the early 1990s, a series of reforms have expanded both the reliance on taxes as a financing source and the tax authority granted to regions. The evolution of tax decentralization in Spain unfolds in various stages (refer to Solé-Ollé, 2015, for a comprehensive overview). Initially, regions were empowered to administer and collect the so-called 'traditional' ceded taxes, such as the Inheritance Tax, the Wealth Tax, the Wealth Transmission Tax, and Stamp Duty Taxes. The term *ceded* denotes that it is the central government's responsibility to regulate and collect these taxes unless it opts to delegate them (cede them) to the region. The designation 'traditional' signifies that the list of ceded taxes expanded in subsequent reforms. During this period, regions also could introduce their *own taxes* in areas not under national government jurisdiction. However, a narrow interpretation of these fields has historically constrained this option (Solé-Ollé, 2015).

In a second stage, starting in 1997, the regions were given the possibility of modifying the tax rates and some other provisions of 'traditional' *ceded* taxes and the right to decide over Personal Income tax rates, in both cases with limits (i.e., progressive rate schedule, the same number of brackets, tax rates in each bracket limited to \mp 20%). To make 'fiscal room' for the regional income tax, the old progressive rate schedule was divided into two parts: 15% of the ten original rates of the schedule of the 1997 income tax became the regional tax schedule, and 85% of each original rate was made the new central rate schedule¹¹. The tax credits were also split in the same proportion, and regional parliaments were allowed to introduce a few new tax credits. In the 2002 there was another reform, which abolished the limitations in the case of the 'traditional' *ceded* taxes, increased the regional tax share to 33%, and ceded three new taxes (Transportation tax, Retail Tax and Electricity Tax). Table A.2 in the Appendix provides a summary of all tax powers of Spanish regions each *ceded* tax since 2002. In 2009, another reform (effective 2010) increased the income tax share to 50% and dismantled most of the

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¹¹ The regions shared and additional 15% of income tax revenues since 1994. With the new Regional personal Income Tax this share was effectively raised to 30%.

limits applied to this tax¹². Table A.3 in the Appendix compares the regional tax powers in the *Personal Income Tax* after the 2002 and the 2009 reforms.

Summing up, after 1997 Spanish regional governments enjoyed a limited degree of tax autonomy. This autonomy was nearly total for some taxes after 2002 and for the Personal Income Tax after 2010. In Solé-Ollé (2015) there is a description of the first steps in the use of tax autonomy. The discussion there is anecdotical, but there are many examples of tax differentiation (both in 'traditional' *ceded* taxes and in the income tax) and of the role of the two main parties, PSOE and PP in it. It is pretty clear from the discussion that the PP has played a role in the process of erosion of the Inheritance Tax¹³ and that the PSOE has started to experiment with redistributive policies at the regional level (e.g., by modifying bottom and/or top marginal tax rates)¹⁴. In the next section, we explore this issue more quantitatively.

4.2. Empirical analysis

Period. In this section, we examine the impact of party control within Spanish regional governments on regional government policies. Our focus extends from tax policies to budget aggregates. We analyze the variations in these policies over two distinct periods: the full span from 2002 to 2021 and the shorter timeframe from 2011 to 2021. These choices are motivated by two main factors. Firstly, regarding tax policies, the year 2002 marks the initiation of the tax autonomy era, as outlined in the preceding section. Subsequently, during the latter period, there was an amplification of regional tax autonomy, attributable to the increased latitude in setting parameters for the Personal Income Tax following the 2009 reform. Also, the Wealth Tax was reinstated in 2011 after its repeal in 2008¹⁵. Secondly, concerning budget aggregates, it's crucial to note that 2002 signifies the conclusion of the transfer of spending responsibilities, from the national to the regional governments. Before this date, comparing budget policies across different regional governments was considerably challenging.

 $^{^{12}}$ The 2002 reform also assigned a share of VAT and Excise Taxes to the regions (35% and 40%) but with no tax powers. These percentages where again raised in 2009 to 50% and 58%, respectively.

¹³ For example, both La Rioja, as early as in 2002, and Madrid in 2007 introduced a 99% tax credit for direct family members, initiating the 'race-to-the-bottom' in this tax. This is similar to what happened in other countries when subnational governments were given autonomy over the inheritance tax (see Brulhart and Parchet, 2015, for evidence on the Swiss case).

¹⁴ Several papers have documented these differentials (see Esteller-Moré and Durán-Cabré, 2006, and 2021, for income and wealth taxes), studied their causes (Foremry, 2024), and evaluated the effect on taxpayer mobility (see Agrawal et al., 2019, and 2024, for income and wealth taxes, respectively).

¹⁵ The PSOE included the repeal of this tax as a temporary measure of its 'stimulus package' in 2008. The PP reinstated the tax as part of its fiscal consolidation policy.

Outcomes. When examining tax policies, our analysis prioritizes several crucial metrics. Initially, we scrutinize the Personal Income Tax, computing an Effective Personal Income Tax Rate across various income brackets, including the average, bottom 50%, and top 10%. Moreover, we evaluate the impact of redistribution through a defined index, which compares the pre-tax income ratio of the top 10% to the bottom 50% with the same ratio post-tax. These variables are derived utilizing tax collection statistics (see Appendix).

Subsequently, our attention turns to the Inheritance Tax. Due to the absence of centralized tax collection data, we rely on simulated tax rates provided by Micó (2024) for inheritances among direct family members. Furthermore, we explore other pertinent taxes. For the Wealth Tax Rate, we calculate an average effective tax rate based on tax collection statistics. Conversely, for Wealth Transmission and Stamp Duty Taxes, we utilize the most representative nominal tax rates available.

Shifting our focus to budget aggregates, our analysis zeroes in on expenditure outcomes. We examine Total Expenditure, categorizing it into Current and Capital expenditure, while also scrutinizing allocations across various programs such as General Administration, Infrastructure, Economic Promotion, Health Care, Social Services, and Education. On the revenue side, our attention is drawn to Own revenues, Intergovernmental Transfers, and Deficit. These figures are presented in 2000 prices adjusted using the Spanish GDP deflator.

Treatment. We establish a binary variable called 'Left President', which is assigned a value of one if the ideological score of the party of the regional president falls below 5 on the 0-10 scale, and zero otherwise. Within our dataset, the PSOE scores a 4 and the PP an 8, while Podemos scores a 2 and Vox a 10. To compute the ideological score of the coalition supporting the president, we calculate the average ideological scores of all the parties that voted 'yes' in the investiture process, with their seat shares in the regional parliament serving as weights. This enables us to categorize left-wing presidents as either Centre-Left (if the average coalition score is equal to or greater than 4) or Far-Left (if the average score is less than 4)¹⁶.

We can use this dataset to examine the ideological turnovers that occurred between 2002 and 2024 (refer to Figure A.4 in the Appendix). Throughout this period, there were 85 regional elections, with ideological turnovers observed in 30 of them, constituting 35% of the total.

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¹⁶ The classification of parties in the different ideology categories follow the one proposed in Curto et al. (2018) and used also in Magontier et al. (2024).

Among these turnovers, 13 instances involved a switch from right to left, while 17 occasions saw a switch from left to right. However, it's worth noting that 6 of these turnovers occurred after 2021, rendering them ineligible for analysis. Thus, we have a total of 24 useful ideological turnover changes to incorporate into our analysis.

Methods. Our primary findings stem from a standard TWFE specification, enabling us to concentrate on the within-region variation in tax policies. The equation is as follows:

$$y_{i,t}^{j} = \alpha_i + \alpha_t + \beta \times Left \ president_{i,t \in k} + X'_{i,t=k0} \gamma + \varepsilon_i \tag{1}$$

where $y_{i,t}^j$ = outcome j (tax or budget aggregate) of region i in year t, Left president_{i,t∈k} = binary variable equal to one if the regional president in i belongs to a left-wing party in term k, $X'_{i,t=k0}$ = control variables, measured prior to the ideological turnover, and α_i and α_t are region and year fixed effects. The β coefficient will tell us about the average effect of party control over one term-of-office (usually four years). The results will show whether regional policies are consistently higher or lower (relative to the region's average) in periods of left-wing vs right-wing government. This approach permits the use of all the ideological turnovers identified in the above paragraph (that is, both the Right→Left and the Left→Right ones).

However, this approach has certain limitations. Primarily, the causal interpretation of these results relies on establishing the strict exogeneity of the treatment. It's plausible that ideological turnovers could be the consequence rather than the cause of implementing tax and expenditure policies. To address this concern, we include several lags of crucial determinants of tax and expenditure policies in our analysis: formula grants per capita (comprising shared taxes, standardized autonomous taxes, and equalization grants), GDP per capita, deficit and debt levels, the margin of victory, and binary variables indicating proximity to elections (as not all regions hold elections simultaneously). The rationale behind this adjustment is that these variables are correlated with the pre-treatment evolution of the outcome and could potentially drive ideological turnovers.

Additionally, we will assess parallel trends using a simplified event study specification. Initially, we confine the event window to the post-treatment term along with two pre-treatment terms and pool together the Right—Left and the Left—Right turnovers. In this setting the treatment is recoded as 1 for the first turnover type and -1 for the second. This setup allows us to examine parallel trends using the second lead of the treatment while minimizing data losses. We believe the approach used is reasonable, given both theoretical expectations and the limited availability of data. For instance, the impact of turnover is expected to manifest swiftly,

typically within the first term (four years). And while some dynamic effects may extend beyond this period, attempting to estimate them would drastically reduce the sample size, as several turnovers occur towards the end of the period.

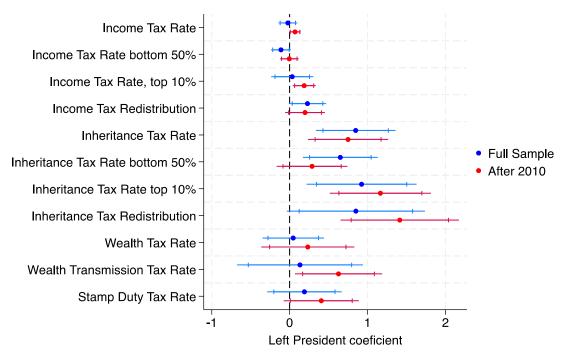
Furthermore, we will exclusively consider ideological turnovers with consistent ruling party identities during the pre-treatment periods. We will focus on sequences of three terms selected from regions that have experienced ideological turnovers, such as: Left—Left—Right or Right—Right—Left. As for controls, we will examine sequences of three terms with no change in the ruling party: Left—Left or Right—Right—Right. This rationale is justified by the intermittent nature of the treatment: turnovers can revert, sometimes after one term. Consequently, the effect of a turnover may be influenced by the dynamic effects of the previous one. We mitigate this concern by focusing on turnovers that follow longer tenure periods.

An additional concern regarding TWFE lies in the potential bias arising from heterogeneity of treatment effects (Goodman-Bacon, 2021). While various methods exist to mitigate this concern, they are often very data-intensive, as they tend to focus on singular turnover types, with some exclusively addressing initial observed turnover (Chaissemarten & D'Haultfoeuille, 2024). To address this issue, we introduce illustrative findings employing the 'fixed-effects counterfactual estimator' (FECT, Liu et al., 2024). Noteworthy is the necessity to apply this estimator separa-tely for each turnover type (Left—Right vs. Right—Left, totalling 13 and 11 cases, respectively). Given the reduced dataset size, it is advisable to interpret the results (coefficients and standard errors) with caution.

Main results. Figure 6 presents the standard TWFE estimates for the tax policy indicators. Each indicator is expressed as z-scores calculated using the within-standard deviation. Consequently, the coefficients indicate the extent to which the within variation of the outcome is accounted for by the variation over time in party control. This enables us to compare the role of party control across outcomes relative to other policy drivers.

We can highlight the following findings. Firstly, there are notable differences between left and right-wing governments concerning the taxation of personal income. Throughout the full period from 2002 to 2021, left-wing governments exhibit a tendency to levy lower taxes on the income of the poorest 50% of taxpayers. However, post-2010, they demonstrate a propensity to tax the income of the wealthiest 10% of taxpayers more heavily. Consequently, in both periods, left-wing governments appear to use the income tax in a more redistributive manner. While these effects are statistically significant, they are relatively modest in magnitude, explaining only a small proportion of the within variation in income tax rates.

Figure 6: Party Control of Government and Regional Tax policy. Main effects for the Full period and for the Period 2011-2021 Coefficient of Left President variable. TWFE estimation.



Notes: (1) Coefficients of a TWFE regression of each outcome and the Left President variable, including as controls measured at the end of each of the two terms prior to the treatment (including formula grants pc, GDP pc, deficit and debt pc, margin of victory, and distance to elections). (2) The lines indicate 95% and 90% c.i. Standard errors clustered at regional level.

Secondly, the disparities between left and right-wing governments are markedly more pronounced in the case of the inheritance tax. Across both periods, left-wing administrations have consistently set higher tax rates for both average and larger inheritances. While their impact on smaller inheritances is evident throughout the entire period, it becomes less pronounced and statistically insignificant after 2010. Consequently, the intensity of redistribution has increased over time. Here's an interpretation of these findings: during this period, there has been a significant 'race-to-the-bottom' regarding this tax, indicating that left-wing governments have resisted pressures to reduce taxes rather than actively increasing them. Furthermore, reforms implemented at the onset of the period disproportionately affected the taxation of small inheritances, leading to the elimination of the tax in some cases. Consequently, after several years, only differences in taxation of larger inheritances remained, automatically rendering the tax more redistributive in regions governed by the left.

Regarding other taxes, the findings indicate that left-wing governments do not exert any significant influence over the Wealth Tax Rate, both for the entire period and following the reintroduction of the tax after 2010. Conversely, left-wing administrations tend to establish hi-

gher indirect tax rates, particularly evident in the case of the Wealth Transmission and Stamp Duty Taxes post-2010.

Validation. Figure A.3 in the Appendix presents the results of the parallel trends test. The report includes the coefficient estimates for the Left President dummy variable and its second lead. Interestingly, the coefficients of the Left President dummy variable closely mirror those of the standard TWFE model. Furthermore, the coefficient of the lead variable is consistently non-statistically significant and remains close to zero across the majority of cases.

Figure 7 below illustrates the FECT dynamic treatment estimated for the average inheritance tax rate over the entire analysis period. It's worth noting that this tax is the one that exhibits a more substantial effect in the TWFE estimation depicted in Figure 6. We present the results for both the Right—Left transition (left panel) and the Left—Right transition (right panel). In both cases, the ATT estimated is quite significant and surpasses the estimation obtained with the TWFE estimator. The average inheritance tax rate noticeably increases following a Right—Left transition and markedly decreases after a Left—Right transition. Additionally, the table includes the p-value of a placebo test, which the model successfully passes. Furthermore, Figure A.6 in the Appendix showcases a similar figure for other inheritance tax indicators utilized in the analysis, yielding analogous results.

a) Right→Left

b) Left→Right

ATT=1.337 (0.012)
Placebo p-value=0.934

ATT=-1.072 (0.011)
Placebo p-value=0.867

Figure 7: Party Control of Government and Inheritance Tax Rate. Dynamic effects. Coefficient of Left or Right President. FECT estimation.

Notes: (1) Dynamic FECT ('fixed effects counterfactual estimator', Liu et al., 2022) plot showing yearly coefficients over one term after the treatment and two terms before. (2) The results are presented for two different treatments: transition Right→Left in the left panel and Left→Right on the right one. (3) The lines indicate 95% c.i., standard errors bootstrapped with 200 replications.

→ ATT 95% CI • ATT

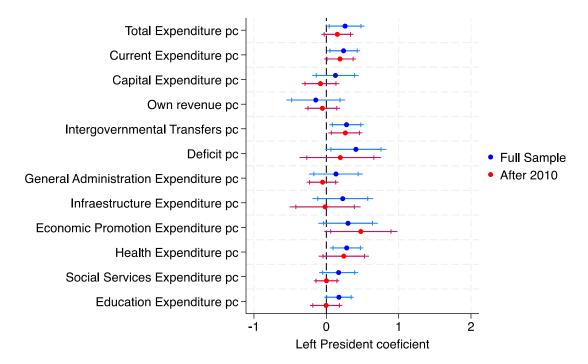
4 -3 -2 -1 0 Time relative to the Treatment

ATT 95% CI • ATT

Heterogeneous effects. Figure A.7 in the Appendix presents the outcomes of two heterogeneous analyses. Firstly, in the top panel, we examine the contrast between the effects of leftwing parties when they are bolstered by center-left coalitions (primarily the PSOE governing

alone or with some parliamentary support from regional center-right parties) versus when they are supported by far-left coalitions (mostly the PSOE supported by Podemos or other parties positioned further to the left). In half of the left-wing terms within our sample, the PSOE governs alone or with support from a center party, while in the remaining half, it receives support from a far-left party. The findings in Figure A.7 suggest that left-wing parties supported by the far left impose slightly lower taxes on the income of the poor, resulting in a slightly higher level of redistribution. The results for the other tax policy outcomes are less clear.

Figure 8: Party Control of Government and Budget Aggregates. Main effects for the Full period and for the Period 2011-2021 Coefficient of Left President variable. TWFE estimation.



Notes: (1) Coefficients of a TWFE regression of each outcome and the Left President variable, including as controls measured at the end of each of the two terms prior to the treatment (including formula grants pc, gdp pc, deficit and debt pc, and margin of victory, and distance to elections). (2) The lines indicate 95% and 90% c.i. Standard errors clustered at the region level.

In the bottom panel of Figure A.7, we present the findings from comparing governments supported by parliamentary coalitions enjoying a significant seat advantage over the opposition with left-wing governments elected in more competitive elections. The results indicate that the left tends to implement lower tax rates when elections are closely contested, implying a higher marginal cost of raising taxes in terms of lost votes. This effect is clearer in the case of the income tax rate, affecting both the poor and the rich. However, it's important to note that the magnitude of these effects is relatively modest.

Budget aggregates. Figure 8 below presents the results for the Budget aggregates and Figure A.8 in the Appendix reports the corresponding parallel trends test. The findings suggest that, over the entire period, left-wing parties have tended to exhibit higher spending. This additional spending by left-wing governments is primarily evident in increased current expenditure across various programs, particularly in health care and education. Notably, this additional spending is financed through inter-governmental grants and larger deficits, with no discernible impact on the amount of own revenue raised. These results likely reflect the soft budget constraints of Spanish regional governments (Esteller-Moré and Solé-Ollé, 2004; Sorribas-Navarro, 2011), with the increased spending by the left-wing appearing as budget largesse, especially since such budget expansions mostly occurred during the PSOE control of the national government.

However, it's important to note that the results undergo some changes after 2010. The coefficient of the deficit is no longer statistically significant, and neither are the coefficients of several expenditure programs. This can likely be explained by the intensity of fiscal consolidation during this period. It is also worth mentioning that regional governments did still receive more grants during this period, and that there is a clear increase in spending on economic promotion.

5. Conclusion

This paper addresses how the diverging objectives of governing parties impact public policy by focusing on the Spanish political landscape. Employing both descriptive and quantitative analyses, we examined national and regional data spanning since the beginning of democracy in 1981. We report three main findings. First, our analysis reveals a notable stability in the interparty differences in platform ideologies until the mid 2000s, which were mostly influenced by shifts in citizen preferences and electoral competition. Second, we also uncovered a deepening schism between major parties after 2007, particularly regarding the issues of territorial organization and social policies, and influenced by the emergence of new, more radical political entities born after the successive crises. Third, at the regional level, we find evidence of distinct tax and spending policies between the main left and right-wing parties, with limited evidence of extreme parties shaping regional policies directly. While these findings offer valuable insights into the interplay between political parties and public policies, it's essential to acknowledge the limitations inherent in our study, such as the complexity of political dynamics and the potential for further nuanced analysis of the mechanisms driving policy divergence. These findings prompt further exploration and debate on the evolving role of political parties in shaping public policy outcomes.

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Appendix: Supplemental material (not for publication)

A.1. Description of the data

Manifesto data:

The <u>Manifesto Project</u> examines election manifestos of the main national (and sometimes regional) parties to analyze their policy preferences. The main dataset reports the percentage shares of quasi-sentences in an electoral manifesto that belongs to a pre-defined political topic. These categories are reported in the related <u>handbook</u>.

We follow Caughey et al. (2018) in defining our main categories. The *Economic Conservatism* dimension captures "the classic left-right divide over the size and scope of government and its role in mitigating inequality." The Social Conservatism dimension captures "post-material and cultural issues such as gender equality, abortion, gay rights, environmental protection, and libertarianism versus authoritarianism". To this, we add a fourth dimension, which we name *Centralization conservatism*, and which aims at quantifying party's support for the current decentralization levels.

Specifically, the four variables read

- Economic Conservatism dimension = (per303 + per401 + per402 + per407 + per414 + per505 + per507)-(per403 + per404 + per406 + per409 + per412 + per413 + per504 + per506)
- Social Conservatism dimension = (per603 + per605 + per606) (per501 + per502 + per503 + per604 + per705)
- Centralization Conservatism dimension =(per302 + per203) (per301 + per204)

Where the 'per' variables are the share of quasi-sentences mentioned earlier collected from the Manifesto Project database.

CIS Barometer data:

The barometers are monthly surveys conducted, excluding August, with the primary goal of gauging the current state of Spanish public opinion. Four thousand randomly selected individuals aged 18 or above across the national territory are interviewed in each survey, providing their opinions and extensive social and demographic data for analysis. The selected sample has a nationally representative scope, with at least 100 interviews conducted in each autonomous community.

We have used the CIS Barometer data to capture the salience of the Spanish population's main economic and political concerns. To do so, we use the answer to the following question: "What is, in your opinion, the main problem that currently exists in Spain? And the second? And the third?".

To study the evolution of preferences on centralization conservatism, we use the answers to the preferred system to organize the State between the following alternatives:

- (1) A State with a single central Government without autonomy
- (2) A State with Autonomous Communities as today
- (3) A State in which the Autonomous Communities have greater autonomy than at present.
- (4) A State in which the possibility of becoming independent States would be recognized for the Autonomous Communities

We synthesize the information in a single metric that captures support for more or equal levels of centralization (answers 1 & 2) versus support for higher decentralization (answers 3 & 4).

Economic policies and indicators data:

The information regarding public spending as a percentage of the GDP, GDP growth rate, unemployment rate and levels of public debt have been obtained from the IMF.

The redistribution index has been built using data from the World Inequality Database (WID), which grants access to the most extensive available database on the historical evolution of the world distribution of income and wealth within and between countries. In particular, we have used the variables "aptincj992" and "addincj992". Variable aptincj992 represents the average pre-tax income of a citizen over 20 years, whereas addincj992 corresponds to the sum of primary incomes over all sectors after taxes and transfers. It includes all in-kind transfers and public spending, which are attributed proportionally to all individuals. This information is gathered for the individuals between the 0th and 50th percentile and those between the 90th and 100th percentile. The redistribution index follows:

$$Redistribution\ Index = \frac{Pre - tax\ Income_{P90P100}}{Pre - tax\ Income_{P0P50}} - \frac{Post - tax\ Income_{P90P100}}{Post - tax\ Income_{P0P50}}$$

Hence, the redistribution Index taxes positive values when pre-tax inequality is greater than the post-tax inequality.

The data on pensions and the minimum wage is publicly available on the Ministry of Inclusion, Social Security and Migrations webpage and can be found in the following report: https://www.seg-social.es/wps/wcm/connect/wss/2af39386-e9b6-49f2-b6d7-9082d74e73cd/20233I04ANECO.pdf?MOD=AJPERES. From this data, we have picked the minimum and maximum pensions and the value of the minimum wage for the period of interest.

Regional data:

The <u>income tax rates</u> have been computed with tax collection data from the Spanish tax administration (Agencia Tributaria): *Estadística de Declarantes del IRPF*, available at https://sede.agenciatributaria.gob.es/Sede/va_es/datosabiertos/catalogo/hacienda/Estadística_de_los_declarantes_del_IRPF.shtml. With this information we compute and effective average tax rate as the ratio of regional tax liabilities and tax bases ('cuota líquida autonómica'/'base liquidable'). We also compute the effective tax rate for the bottom 50% and the top 10% of the distribution. We assign tax liabilities and tax bases to these percentiles interpolating the data of the brackets reported in the publication and making use of the cumulative number of taxpayers in each bra-cket. The redistributive index is computed in the same way than described above for the national government.

The <u>wealth tax rate</u> is computed in a similar way from the same source: *Estadística de Declarantes del Impuesto de Patrimonio*, available at https://sede.agenciatributaria.gob.es/https://sede.agenciatributaria.gob.es/https://sede.agenciatributaria.gob.es/Sede/datosabiertos/catalogo/hacienda/ Estadística_de_ Impuesto_sobre_Impuesto_sobre_https://sede.agenciatributaria.gob.es/Impuesto_sobre_Installogo/hacienda/ <a hr

The <u>inheritance tax rates</u> are obtained from the tax simulator developed in Micó (2024). In this work, the author simulates the effective average rates would be for group 2 of heirs (direct ascendants, direct descendants, spouse). Specifically, she applies the kinship deduction in each autonomous community, calculates the tax due by applying the marginal rates of each autonomous community (which may or may not be the state scale), and apply the general tax credit to the tax due if applicable.

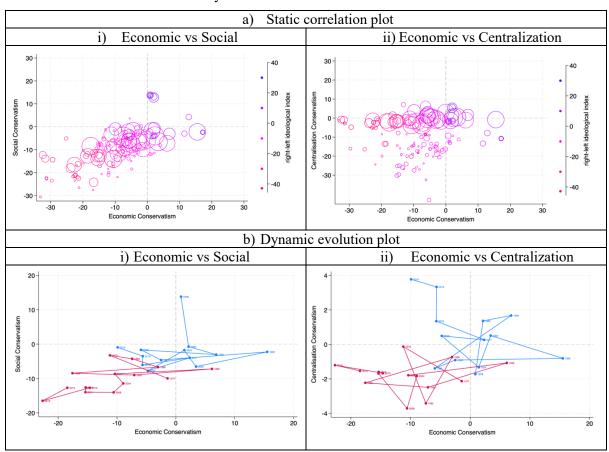
The <u>wealth transmission</u> tax rate and the <u>stamp duty</u> tax rate are obtained from the yearly publication by the Spanish administration, *Tributacinó Autonómica*, <u>https://www.hacienda.gob.es/es-ES/Areas%20Tematicas/Financiacion%20Autonomica/Paginas/libro%20electronico%20tributacion.aspx</u>.

The Budget data are outlays and is obtained from the 'Liquidación de Presupuestos de las CCAA', available at https://serviciostelematicosext.hacienda.gob.es/SGCIEF/PublicacionLiquidaciones/aspx/meuInicio.aspx. All categories are divided by resident population and computed in 2000 prices using the GDP deflators (www.ine.es).

The <u>political variables</u> (party of the regional president, seats of parties, and vote in the investitute session) are obtained from Wikipedia (see e.g., for Madrid. https://es.wikipedia.org/wiki/Elecciones_a_la_Asamblea_de_Madrid_de_2023). The classification of parties in the ideology categories follow the one used in Curto et al. (2018) and Magontier et al. (2024).

A.2. Additional tables and figures

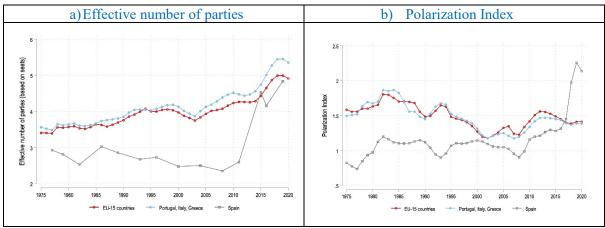
Figure A.1: Correlation Among Issue Positions. Party Manifesto Data. Period 1979-2021



Notes: (1) Panel a shows the correlation between the positions of parties in the Economic vs Social issues (panel i) or between Economic and Centralization issues. Each circle is a party-election pair; the size of the circle is proportional to the seat share of the party in the national parliament; reddish circles indicates that the party is more on the left and purplish ones that the party is more on the right. The graph suggests that the positions in the Economic and Social issues are positively correlated but the positions in the Economic and Centralization issues are mostly orthogonal. (2) Panel b shows a dynamic evolution plot: it reports the co-evolution of party positions along two issue dimensions year after year for the two main parties (PSOE in red and PP in blue). The graphs show that Economic and Social move in the same direction while the Economic and Centralization ones diverge after some time. (3) Source: Manifesto project.

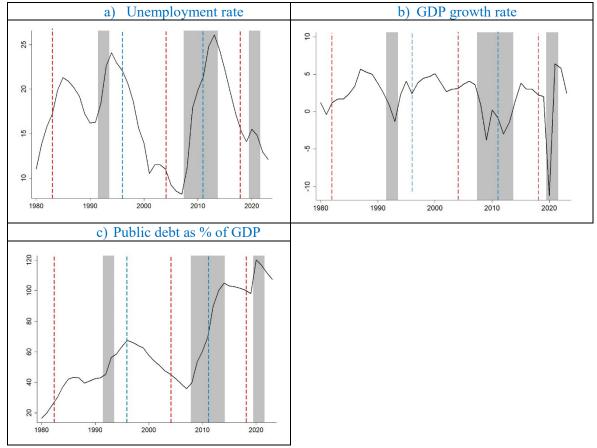
Figure A.2: Fragmentation and Polarization of the party system across Europe.

Party Manifesto Data. Period 1975-2020



Notes: (1) Panel a shows the Effective Number of Parties, computed for the whole party system and for the left-wing, right-wing and centre parties. Panel b shows right-left polarization index computed as the vote-weighted distance to the mean ideological position for each party. (2) Sources: Manifesto Project.

Figure A.3: Economic performance under left/right-wing governments. IMF Data. Period 1980-2023



Notes: (1) Each of the panels indicates the evolution of one economic indicator: unemployment rate (panel i), GDP growth rate (panel ii), and the stock of debt over GDP. (2) The dotted lines indicate government turnover (Left→Right in blue and Right→Left in red) and the grey areas indicate recessions. (3) Sources: IMF.

Table A.1:
Regional powers over fully assigned taxes, after 2002

Tax	Power
Wealth Tax	Basic personal and family relief
	Tax rare schedule and tax credits
	Tax collection and inspection
Inheritance Tax	Tax base reductions
	Tax rate schedule
	Amounts and coefficients on pre-existing wealth
	Tax credits
	Tax collection and inspection (since the early 1980's)
Wealth Transmission Tax	Tax rates (over most bases)
	Tax collection and inspection (since the early 1980's)
Stamp Duty Tax	Tax rates (notary documents)
	Tax credits (notary documents)
	Tax collection and inspection (since the early 1980's)
Gambling Tax	Exemptions
	Tax base
	Tax rates and lump-sum quotas
	Tax collection and inspection (since the early 1980's)
Retail gas tax	Tax rates within bands (e.g. 0 to 48euro per 1000 l. of gas
Transportation tax	Tax rate increase with a 15% ceiling

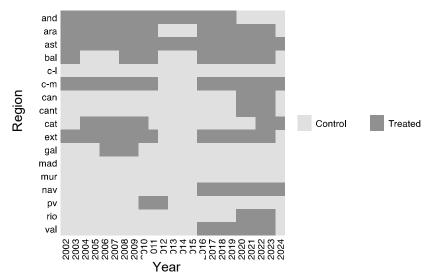
Source: Own elaboration based on Esteller-Moré and Durán-Cabré (2006).

Table A.2:
Regional powers over the personal income tax, after 2002 and 2009

After 2002	After 2009
Tax rates, with limits:	Tax rates, with limits:
Progressive rate schedule	Same, but no need to keep same number of brackets
Same number of brackets	
Increase within ±20% band	
No powers wrt irregular income base	
Tax credits:	Tax credits:
Housing deductions within ±50% band	Housing deductions
Personal and family deductions, holding	Personal and family deductions
constant effective tax rate by bracket	Non-business investments
	Non-exempt subsidies received from the AC
	Basic personal and family relief, within ±10% band

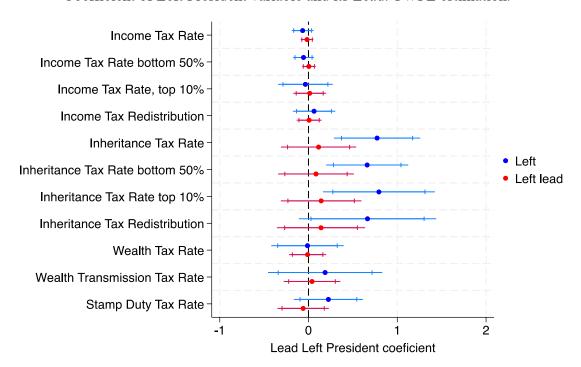
Source: Own elaboration based on Esteller-Moré and Durán-Cabré (2006) and Law 22/2009.

Figure A.4: Illustration of Left president treatment. Period 2002-24



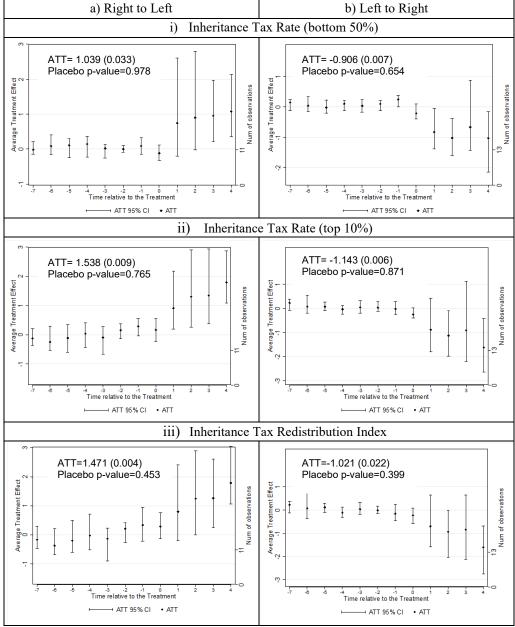
Notes: Figured elaborated with PanelView. Treated=Left President / Control = Right President. Regional elections are held every 4th year and in the same year in all regions but Andalucía (and), Catalunya (cat), Galicia (gal) and Basque Country (pv), where the president is able to call for early elections.

Figure A.5:
Party Control of Government and Regional Tax policy.
Parallel trends test for the Full period
Coefficient of Left President variable and its Lead. TWFE estimation.



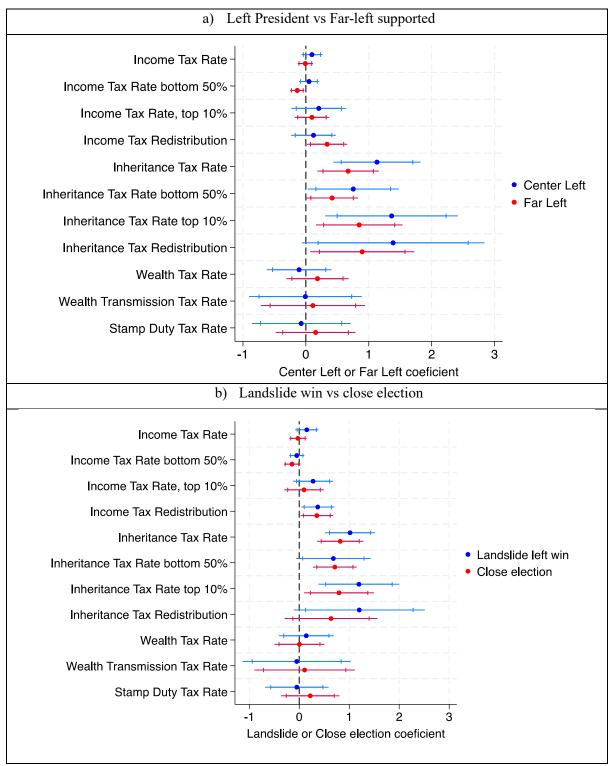
Notes: (1) Coefficients of a TWFE regression of each outcome and the Left President binary variable and its lead, including as controls measured at the end of each of the two terms prior to the treatment (including formula grants pc, gdp pc, deficit and debt pc, and margin of victory, and distance to elections). (2) The lines indicate 95% and 90% c.i. Standard errors clustered at the region level

Figure A.6: Party Control of Government and the Inheritance Tax. Dynamic effects. Coefficient of Left or Right President. FECT estimation.



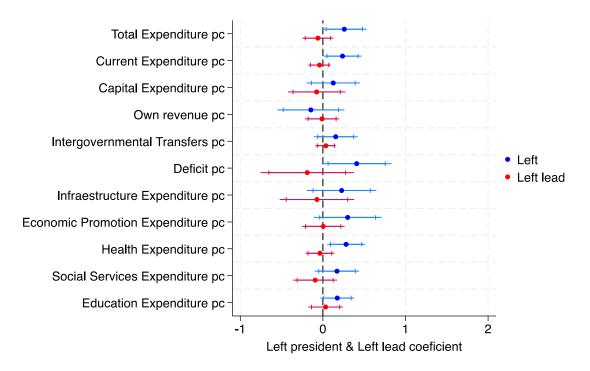
Notes: (1) Dynamic FECT ('fixed effects counterfactual estimator', Liu et al., 2022) plot showing yearly coefficients over one term after the treatment and two terms before. (2) The results are presented for two different treatments: transition Right→Left in the left panel and Left→Right on the right one. (3) The lines indicate 95% c.i., standard errors bootstrapped with 200 replications. (4) The table reports the value of the ATT over the years after treatment (and its standard error) and the p-value of the placebo test.

Figure A.7: Heterogeneous effects of Party Control on Regional Tax policy. Results for the Full Period. TWFE estimation



Notes: (1) Coefficients of a TWFE regression of each outcome and the Center Left and Far-Left variables, including as controls measured at the end of each of the two terms prior to the treatment (including formula grants pc, gdp pc, deficit and debt pc, and margin of victory, and distance to elections). (2) The lines indicate 95% and 90% c.i. Standard errors clustered at the region level.

Figure A.8:
Party Control of Government and Budgets aggregates.
Parallel trends test for the Full period
Coefficient of Left President variable and its Lead. TWFE estimation



Notes: (1) Coefficients of a TWFE regression of each outcome and the Left President variable and its lead, including as controls measured at the end of each of the two terms prior to the treatment (including formula grants pc, gdp pc, deficit and debt pc, and margin of victory, and distance to elections). (2) The lines indicate 95% and 90% c.i. Standard errors clustered at the region level.

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2020/01, Daniele, G.; Piolatto, A.; Sas, W.: "Does the winner take it all? Redistributive policies and political extremism"

2020/02, Sanz, C.; Solé-Ollé, A.; Sorribas-Navarro, P.: "Betrayed by the elites: how corruption amplifies the political effects of recessions"

2020/03, Farré, L.; Jofre-Monseny; J., Torrecillas, J.: "Commuting time and the gender gap in labor market participation"

2020/04, Romarri, A.: "Does the internet change attitudes towards immigrants? Evidence from Spain"

2020/05, Magontier, P.: "Does media coverage affect governments' preparation for natural disasters?"

2020/06, McDougal, T.L.; Montolio, D.; Brauer, J.: "Modeling the U.S. firearms market: the effects of civilian stocks, crime, legislation, and armed conflict"

2020/07, Veneri, P.; Comandon, A.; Garcia-López, M.A.; Daams, M.N.: "What do divided cities have in common? An international comparison of income segregation"

2020/08, Piolatto, A.: "Information doesn't want to be free': informational shocks with anonymous online platforms" 2020/09, Marie, O.; Vall Castello, J.: "If sick-leave becomes more costly, will I go back to work? Could it be too soon?"

2020/10, Montolio, D.; Oliveira, C.: "Law incentives for juvenile recruiting by drug trafficking gangs: empirical evidence from Rio de Janeiro"

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